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Protecting a new generation against HPV: Are we willing to be bold?

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Abstract

Despite the advent of a novel human papillomavirus (HPV) vaccine to prevent associated cancers, HPV vaccination rates in the United States (US) remain well below national goals. Two recent reports by the Centers for Disease Control and Prevention (CDC) and the President's Cancer Panel (PCP) have identified missed clinical opportunities as an intervention point for increasing HPV vaccination rates, including the provision of immunization in alternative venues by varying healthcare providers. In this paper, we specifically comment on the idea of offering HPV vaccination in emergency departments (ED) by emergency medicine (EM) physicians as posited by Hill and Okugo (2014), identifying both strengths and limitations to this strategy. We also offer ideas for additional research, suggest provider and healthcare systems changes, and discuss needed policy changes to improve HPV vaccination rates in the US.

Keywords

alternative settings; emergency departments; HPV vaccination; missed clinical appointments; physicians; policy

Currently, 2 vaccines (Gardasil®, Merck & Co.; Cervarix®, GlaxoSmithKline) have been approved to prevent transmission of human papillomavirus (HPV) 16 and 18,[1] the virus types linked to more than 20,000 annual cases of cancer in the United States (US).[2] Despite this medical advent, vaccination rates remain well below national goals.[2] In 2013, among US adolescents aged 13–17, an estimated 57% of girls and 35% of boys had initiated the HPV vaccine series, while 38% of girls and 14% of boys had completed the full series.[3] Two recent reports by the Centers for Disease Control and Prevention (CDC) and the President's Cancer Panel (PCP) cited missed clinical opportunities as one of the most important reasons for low HPV vaccination rates.[2,3] Indeed, many age-eligible adolescents and young adults who interact with the healthcare system are not receiving the vaccine as recommended by the Advisory Committee for Immunization Practices (ACIP). To address this concern, the PCP specifically recommends maximizing access to HPV vaccination services by increasing the number of alternative venues and healthcare providers offering

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vaccination. Examples of alternative venues include schools, pharmacies, health departments, community settings, urgent care centers, and emergency rooms.[2,4–6]

The study by Hill and Okugo explores the use of emergency departments (ED) for HPV vaccination by assessing emergency medicine (EM) physicians' attitudes toward the provision of this preventive service in an ED setting.[6] The study is novel in that EM physicians have not been included in research examining HPV vaccination attitudes, intentions, and behaviors; previous studies have focused on pediatricians, family physicians, and gynecologists.[7] The study also initiates a dialog about perceived barriers to HPV vaccine provision in an ED setting, including time constraints, reimbursement concerns, and the need to discuss patients' sexual history prior to vaccination, which have been cited by providers in other healthcare settings.[8] Furthermore, there were some noted differences in attitudes between board-certified EM attending physicians and physician residents regarding HPV vaccination. For example, reported self-efficacy in ability to target high-risk women was a significant predictor of EM attending physicians' willingness to recommend the HPV vaccine in comparison to EM resident physicians.[6]

Hill and Okugo's exploratory research is a compelling starting point for further work on provision of HPV vaccination in alternative settings. In moving forward, several additional questions remain. For example, their study does not explicitly address HPV vaccine series completion. Although there is emerging evidence that fewer than 3 doses may be efficacious,[2] current ACIP recommendations are based on receipt of all 3 doses.[1] There is also research which suggests HPV vaccine uptake and series completion are 2 distinct behaviors, requiring differing interventional strategies.[4,9] More research is needed to establish the role an ED, or any alternative setting, can fill in promoting series completion. Additionally, Hill and Okugo focused on young adult females who are considered a part of the "catchup" pool of unvaccinated women. A bold move would be to also include a focus on young adult males as well as to explore the use of pediatric emergency centers and other alternative pediatric providers to promote vaccination of very young females and males (ages 9 through 12).

Regardless of whether young males and females are 9 or 19 y of age, to fully protect the new generation, our nation must come to terms with the fact that the Victorian ideal of sexual purity until marriage is no longer realistic. Given that HPV is spread through genital contact, including vaginal, anal, and oral sex as well as genital-to-genital contact,[10] public health professionals cannot afford to indulge parents in the illusion that sexually-naïve females do not need the HPV vaccine or that male children do not play a role in HPV transmission. In essence, sexual mores cannot be allowed to interfere with the public health effort to finally achieve meaningful reductions in the annual incidence of HPV-related cancer in the US. This effort will also require providers, regardless of medical specialty and practice type, to become well-educated about HPV infection and preventive vaccination. Providers themselves will need to relinquish any connection they may have made between sexual activity and the vaccine; offering the vaccine with equal enthusiasm to all those eligible (regardless of sexual risk behavior) is paramount. Providers will also need to initiate frank and open discussions with parents who may otherwise forgo vaccinating their children. More specifically, providers must educate parents about the HPV vaccine, as lack of

knowledge appears to be a common barrier to vaccine acceptance among this group of decision-makers.[3,8] In addition, the prevalent misconceptions about the HPV vaccine need to be addressed, as current research confirms the vaccine's safety and lack of influence on sexual behaviors, which are common concerns among parents.[3,7,11,12] Indeed, provider recommendation is fundamental to increasing HPV vaccination rates in the US.[13] Further research that identifies predictors of parental and personal acceptance of HPV vaccination in an ED, and other alternative settings,[14] is also essential to protecting this new generation.

In addition to research, healthcare systems will require alteration to truly promote significant use of the HPV vaccine in the US. For example, integrated electronic health records and immunization registries will be needed to track and document HPV vaccination records between alternative settings such as EDs and patients' medical homes. Perhaps most importantly, adolescents and young adults lacking a medical home – such as those individuals often seen in EDs – should become a focal point of HPV immunization efforts, including intensified efforts directed toward series completion. As Hill and Okugo suggest, EDs serve as a safety net for those without a medical home; providers should seize these opportunities to engage patients in preventive health measures. Last, financial concerns for both providers and patients have been documented as barriers to HPV vaccination.[2,8] This point is particularly salient as it relates to possible non-coverage of HPV vaccination by public and private insurers when vaccines are delivered in alternative settings such as the ED.

The annual death rate from HPV-related cancers demands much more than minor alterations to our current patchwork approach to prevention. Until the US develops the political will to comprehensively provide HPV vaccination to school-age children (much like our Australian[15] and British[16] counterparts), and to fully use all available alternative settings for vaccination in a coordinated approach, the endemic levels of HPV-related morbidity and mortality and associated healthcare costs will remain unchanged. Simply stated, the way forward in averting HPV-associated cancers is a well-marked path, one that requires relatively simple systems-level changes by a dedicated generation of healthcare providers.

Abbreviations

ACIP	Advisory Committee for Immunization Practices
CDC	Centers for Disease Control and Prevention
ED	emergency department
EM	emergency medicine
HPV	human papillomavirus
PCP	President's Cancer Panel
US	United States

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